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# **INFRASTRUCTURE PROJECT FINANCING IN ASIA LESSONS LEARNED**

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## **I. INTRODUCTION**

Public fiscal deficit has long plagued governments in developed as well as developing countries. Yet the demand for infrastructure has increased steadily and governments are having difficulties in raising sufficiently and rapidly the required financing to meet such demand. In developing countries, the situation is even more urgent because of rising economic growth which is limited by infrastructure supply systems that historically have been insufficient in quantity as well as in quality.

In an increasing number of countries around the world, the public and private sectors are joining together to provide the badly needed infrastructure and overcome the funding constraints. Although the balance of public and private responsibilities varies among projects, public-private partnerships have one central strength: they draw on the best of each sector to fulfill infrastructure needs which neither sector alone could provide. Since no borrowing on the part of the government or government agency is involved, private financing of infrastructure projects shifts the debt burden from the government to the private sector. The government, in this manner, conserves its limited resources for other social infrastructure needs such as health, education, flood control and drainage. In return, the private sector earns a reasonable rate of return for its role in the financing, construction and operation of the project.

By attracting domestic and foreign private entrepreneurial energy and capital (both debt and equity), the scheme contributes to the expansion and improvement of much needed infrastructural facilities which otherwise would not have come onstream and whose absence would constrain economic development of the country. The private sector is likely to provide sound management, speedy implementation and operational efficiency including the adoption of innovative design features. In addition, because the private sector is more focused on profit/loss than the public sector, it is by nature more efficient and cost-effective than public sector entities. With this focus on profit/loss, private firms have as a key objective lowering operating costs, increasing capital investments and utilize the most up-to-date and efficient technologies.

Given the wide range of infrastructure services that lend themselves to BOT schemes, it is necessary to have a thorough understanding of the issues involved in getting a BOT-type project off the ground. The attractiveness of the use of BOTs in terms of finance and timeliness for infrastructure projects must be balanced with an in-depth knowledge of the risks involved, such as country, political, completion, performance and operating, and cash risks. This paper will analyze the most popular infrastructure finance methods and briefly describe the current trends and developments around the world. It will also highlight several relevant examples in Asia and summarize the major lessons learned in project finance and the pitfalls to avoid.

This paper will analyze the current trends and developments in privatization around the world and highlight relevant examples in Asia. It will also briefly summarize the lessons learned in project finance and the pitfalls to avoid.

## **II. TRENDS & DEVELOPMENTS: STATISTICS ON PRIVATIZATION & PRIVATE PROVISION OF PUBLIC SERVICES WORLDWIDE AND FOCUS ON ASIA.**

"Privatization" is a relatively new term in the development lexicon which can mean different things to different people. This wide scope of interpretation is evidenced by the variety of terms that have been adopted to explain the privatization process: "peoplization" in Sri-Lanka, "popular capitalism" in Chile and the all-encompassing "private sector development" in some countries. In broad terms, privatization implies the transfer of ownership or management of state-owned enterprises (SOEs) to the private sector, or the dilution of public ownership via increases in private financing of new projects.

While the concept of privatization is relatively new, its application is even more recent in economic development. In 1988, the total proceeds of privatized SOEs worldwide were approximately \$29.5 billion according to *Privatisation International*. This figure went to \$24.7 billion in 1989 and to \$25.3 billion in 1990. With the abolition of centrally-planned economic systems in Eastern Europe and the former Soviet Union, privatization has become an even more important development strategy in the overall economic restructuring and liberalization of world markets. As evidence, total privatization proceeds in 1991 reached \$53.2 billion, an increase of 110% over the previous year<sup>1</sup>. Similar results were achieved in 1992, with worldwide privatization transactions exceeding \$53 billion in total value.

Privatization implementation varies among different regions and countries. Mexico and Chile in Latin America have proven to be the most aggressive and successful in realizing positive results from their privatization programs, serving as a stimulus for other countries in the region such as Argentina and Brazil. In Mexico, around 200 public sales have raised about \$17 billion or 6.6% of the country's gross domestic product (GDP) after three years. Hundreds of losing state-owned enterprises (SOEs) have been closed through the privatization program, allowing the government to turn around the 8% deficit in 1981 to a surplus and bring inflation below 20%<sup>2</sup>. Similar results have been achieved in Chile.

Despite such proven benefits, the development of privatization initiatives has been rather slow in other countries owing to a lack of familiarity with the concept or the fear of labor redundancy displacement and its political consequences. For these reasons, many countries have started privatization under the form of private financing of infrastructure projects rather than outright sales of existing SOEs. This method of privatization via dilution of the public sector involvement minimizes the risk of labor displacement while increasing the supply of much needed infrastructure services such as water, electricity, road, ports, telecommunications or solid waste removal at a faster speed and improved quality. The latest aggregate data available for

major privately financed infrastructure projects indicates that \$22.7 billion in financing have been signed to such projects and \$36.6 billion are planned for 1993.

Private financing of infrastructure projects encompass a wide spectrum of public-private relationships with varying degrees of public and private responsibility. Important factors include nature of the developer's organization, source of initiative, who operates the facility, ownership (including duration), financing sources, and type of revenues. The most popular methods of infrastructure project financing are briefly described in the next section.

### **III. OVERVIEW OF INFRASTRUCTURE PROJECT FINANCING METHODS**

#### **A. Build-Own-Operate (BOO)**

The BOO method is used when the infrastructure facility is brand new rather than existing, requiring financing for construction ("build") such as the Bangkok Hopewell Rail, the Mexican toll road or the French MUSE tunnel. The sponsoring consortium which finances the project takes care of the construction and operations of the facilities as owners without worrying about transferring back the facilities to the host country government. One major reason why the transfer is not considered by the government as necessary is because it is not under political pressure to own the facilities. In general, countries which are truly committed to private sector development and liberalization tend to use this method as one privatization strategy.

#### **B. Build-Operate-Transfer (BOT)**

The BOT method (more accurately referred to as "Build-Own-Operate-Transfer" or BOOT) is used for new projects requiring construction such as the Philippines power plant and port terminal, the Pakistan Hab River power plant or the Malaysia Saba water supply. The sponsoring consortium financing the project takes care of the construction and operations and is expected to transfer the ownership of the project to the host government at some future date, normally at no cost. Depending on the time of transfer, the performance of the sponsor and the remaining economic life of the project, the host government may opt to extend the sponsor's operation of the project to some future period in time.

One major reason for the transfer feature has been the concern many governments have concerning private ownership and control of sensitive or strategic economic activities such as telecommunications, transportation and infrastructure, resulting in a hesitancy to allow total privatization. Additionally, as the concepts of BOO and BOT are still new to many countries, many decision-makers are still trying to understand how they can best apply these techniques to their particular situations. As evidence of the lack of a clear understanding of the BOT and BOO financing methods, we find that many people talk about the two concepts as though they are interchangeable and synonymous. To the contrary, specific components of each method significantly distinguish them from each other. For example, application of the BOT method often requires some financing participation on the part of the host government, and the tariff

structure is generally regulated to avoid monopolistic pricing practices

### **C. Build-Transfer-Operate (BTO)**

For governments which are not committed to privatization, a derivative of BOT called Build-Transfer-Operate (BTO) is used. Examples include the German and Hungary toll roads and the Poland Modlin airport. With this method, there is no private ownership and the operation resembles a franchise arrangement rather than a BOT. BTO often has public participation in funding and it is not unusual for the government to pay for maintenance of the facilities. This method is preferred to the BOT when limiting legal risk such as tort liability is a major concern, as it is generally more difficult to sue the government than it is to sue a private concern.

### **D. Buy-Build-Operate (BBO), and Derivative Methods**

In projects involving existing facilities, the sponsoring consortium can purchase the assets from the government, expand capacity and then operate. This method, referred to as Buy-Build-Operate (BBO), is used for by governments that are committed to privatization and wish to expand the capacity of existing operations. Examples include the Philippines light rail system, the Pakistan telephone operations and the Dublin, Ireland beltway.

A derivative of BBO is the Lease-Develop-Operate (LDO) method. This method is similar to BBO except that full privatization is avoided through the government's retention of ownership rights. Under this arrangement the government receives cash flows as specified by the lease agreement and existing facilities are financed by the lessee. The Toronto airport terminal, the Atlantic City International airport and the Kuala Lumpur/Kauntan road are examples of LDOs.

Another derivative method allows the government to retain ownership of existing facilities while the private sector financed expansion is owned by the sponsor. This method is called Add-Own-Operate (AOO). Examples of AOO include an addition of a fuel facility on an airport site which belongs to the government. This method is also used if the government's objective is, for example, to maintain the existing labor force while increasing the service supply and creating competition (thereby increasing efficiency) within the state-owned facility. A third derivative is called Contract-Add-Operate (CAO) and is used in those cases where ownership is not allowed even for the private sector financed expansion. These methods are popular in waste processing plant expansion projects.

## **IV. GENERAL ISSUES TO BE CONSIDERED IN BOT-TYPE PROJECTS**

During the preparation and evaluation stages of a BOT-type project, it is essential to research the various aspects involved in each stage of the arrangement, from the initial planning and evaluation stage to the negotiation/promotion/development stage to the implementation stage. The BOT-type programs conceived of to date have been difficult, to say the least, and numerous lessons have been learned during all stages of this type of project.

BOT projects are increasing in dollar size, as well as the number of participants, reflecting monumental infrastructure and energy undertakings. Banks worldwide are reducing their lending in general, and this has a negative effect on the availability of funds for higher-risk project financings. The shrinking market has resulted in new pressures on project development and financiers.

Less than ten years ago, a single lender would be willing to underwrite power projects with about \$100 million, now those same projects often need \$300 million to \$500 million, and no single lender is willing to sponsor all of the debt, so sponsors must put together unwieldy groups of banks and other lenders. The marketplace has responded in ways that permit deals to get done, but it requires much more work and costs project sponsors more.

Sponsoring consortia have become large not only because of the size of the project, but also because they are shying away from the risks. The risks have increased because of the size of the project, therefore you have to have more participants to allocate costs equitably.

**A. General Characteristics of Successful Projects:**

- The local economy cannot have the public funds available for capital projects, e.g. there must be a strong need for private capital.
- The project must serve a pressing public need.
- There must be a feeling among the top levels of the public sector that the private sector would be able to perform the capital projects and manage the risks more efficiently and effectively.
- The sponsoring agency should not be a competitor.
- The private developer must provide value added and possess unquestionable technical expertise to design, build and operate the project.
- The awarded contractors/suppliers must be willing to enter into turnkey design/construction contracts with firm prices and completion terms and conditions.
- The project should be considered financeable on a limited-recourse basis. Non recourse financiers need assurances that a project will be completed within budget and on time.
- The project is able to collect substantial user fees and has the potential for non-user revenues.

- A single agency should negotiate the binding agreement
- The government should provide some backup credit support, this is usually provided by multilateral development agencies or export credit agencies
- The technical, economic and commercial elements of a BOT-type project should be closely integrated and coordinated. Clear communication between the project participants at all stages of the project is necessary when working out financing arrangements, especially when relying on syndicated financing.
- Personality traits of key individuals/managers involved in the BOT stages must not be overlooked. Different personality types are needed at different stages of the project. Due to the involvement of international participants, cultural difficulties will be encountered, and adequate management of cultural issues by the project coordinator/ manager is needed at these times to avoid jeopardizing the project

**B. General Problems Encountered**

- The availability of credible project developers and equity investors with experience in packaging these projects.
- Ability of governments to provide the necessary level of cooperation/ integration and support for such projects.
- Formulation of workable corporate and financial structures. These projects are extremely complex as they involve risk allocation and sharing arrangements.
- High Development Costs - expensive consultants and advisors/lawyers.
- Conflict of Interests (e g. between the needs of the project and expected financial return of suppliers/contractors).

**V. GENERAL LESSONS LEARNED**

A common lesson learned through the execution of numerous BOT-type project is the necessity for trust and communication between the project participants. The untrusting relationship between the private and public sector partners leads to misunderstandings and doubts about motives and intensifies where a sharing of risks must be negotiated. The public and private sector negotiators must trust each party and collaborate as a team rather than work as

adversaries This mistrust slows the process of early negotiations, and leads to the costly involvement of additional low-value-added consultants, lawyers and arbitrators

**A. Negotiating Issues**

**1 ACCEPTANCE OF LOSS OF CONTROL.**

A significant factor in the early stages of a BOT-type project is that the government is usually troubled by sharing power and the perceived loss of control. The government must recognize that one of the costs of private investment through BOT-type schemes results in relinquishing a certain amount of control.

**2. ACCEPTANCE OF PUBLIC SECTOR REGULATIONS.**

The private sector must acknowledge that the government does not operate as a private entity and it is difficult for the government to appoint one person to negotiate freely and agree to virtually any reasonable conditions.

**3. ALLOCATION OF RESPONSIBILITIES TO A SINGLE PERSON:**

The appointment of responsibilities to a single individual is key to the timely execution of a BOT-type project. Lack of a single authority to negotiate and bind the government or private sector groups results in a paralysis of the negotiations.

**4 NEED FOR FLEXIBILITY**

When negotiating a BOT-type scheme, flexibility is required by both the public and private sector participants, (e.g. public sector procurement regulations and additional red tape slows the project and the responsibility should therefore be transferred to the private sector).

**5. COMPONENTS OF A NEGOTIATING TEAM.**

Governments are usually at a negotiating disadvantage, as they lack the experience with the private sector organizational structure and financing models as well as exposure to the experts in the various fields required to pull off a BOT program, (e.g. financial experts, lawyers, investment bankers, environmental specialists). Therefore, the government must be able to recruit expert lawyers and advisors for this stage.



**B. Packaging Issues**

One of the main reasons for projects failing is due to the relative shortage of "packaging skills" based on sound principles and practices. Without the basic components of the project acceptable to all parties, no BOT-type project will be able to run smoothly. Issues which must be dealt with under packaging are:

**6 PROJECT COMPANY**

The project consortia need to approach the projects on the basis that they are setting up a business, not simply offering technical, construction and consulting services with some project financing.

**7 TIMING.**

The length of negotiations can destroy a project, being able to coordinate the required resources in order to head off this problem is essential. It should be noted, however, that regardless of the dollar value of the projects, each agreement requires roughly the same amount of time and effort to negotiate.

**8. PRIVATE SECTOR EXPERIENCE.**

There is a very limited knowledge base on practical approaches to the creation of these complex public/private agreements. BOT-type projects are usually managed by private sector managers with little or no experience with the method. In addition, projects are frequently staffed by "seconded" staff, who are temporarily assigned to the project, breeding inexperience.

**9 PUBLIC SECTOR EXPERIENCE:**

The public sector is generally slow in developing a project and seeing it through the implementation stage, primarily because of size of the public sector and the numerous vested interests involved. The public sector has limited experience in the preparation and execution of large infrastructure projects under the time and cost and profit conditions typically encountered by the private sector.

**10. SELECTION PROCESS:**

The selection of a project to be awarded must be accomplished on a competitive basis and evaluated by an independent and incorruptible expert panel, as they are under close political scrutiny. To select projects with

even the slightest hint of favoritism would risk legal challenges by the "losers" and inevitably delay negotiations

Any agreement reached between the parties must be both a sound and unique business arrangement and one that will withstand the test of close public scrutiny. At the outset, it must be assumed that every aspect of the agreement will be carefully scrutinized by the public and by political opponents

**11. PROJECT COMPONENTS:**

The project should be structured competitively to secure the required funding. Profit has to be easily identifiable to the project participants

**12. CREDITOR INVOLVEMENT:**

Project creditors waver in intensity of interest in the project throughout the project's development and implementation stages, creating ordeals while the project company struggles to develop the financial structure of the project. This is a result of the long life of a BOT-type project and can therefore be mitigated through proper structuring before the negotiations stage.

**13. PROVISIONS:**

Project partnerships should have exit provisions for incompatible or non-performing partners and entry provisions for new participants.

**C. Political Issues**

**1. OBJECTIVES AND CONSTRAINTS:**

The team must clarify the host government's objectives and constraints, especially financial. There must be inadequate government funds and adequate financial guarantees available for the project, and therefore political will to utilize the private sector for the project.

There must be a high need for the project which has been perceived for years by government officials with clout. The roles and attitudes of the government, the equity investors/sponsor and lending institutions are critical if a BOT-type project is to work. There must be a clear decision by the government to support this type of project.

**2 POLITICAL RISK**

There needs to be a perception of low political risk in order to attract sound international institutional investors. Those projects which have been the most successful, are carried out in countries where the political stability is well-assured. This provides the investors with security to know that the project should be able to be completed without changes in the government's makeup, laws, regulations, etc

**3. POLICY FRAMEWORK:**

A legislative, legal and regulatory policy framework for foreign investment and regulation of public utilities should be in place before individual projects are implemented on an ad hoc basis. If this is not the case, there is a high probability that the total effort will lead to poor results.

The establishment of legislation on issues ranging from foreign investment to actual BOT programs, is a prerequisite to the performance of a BOT program. The earlier in the process that the legislation is established, the higher the potential to attract investors to the project.

**4. COMMUNICATION BETWEEN PARTIES WITH VESTED INTERESTS:**

The consensus process within government is both difficult and time-consuming. Since the issues that must be addressed span technical, fiscal, and economic questions, this framework must be based on a consensus among the relevant technical and economic Ministers, and the concerns of vested interests, labor unions, consumers, government officials and politicians, must be addressed.

**D. Project Risks**

It must be understood by all parties involved at the outset of a project that risks associated with a BOT-type project must be shouldered by that party or parties who are most able to assume them. Before the creation of a project's financial structure, the project must be subjected to intensive risk analysis and the contractual documents should incorporate mitigants to make the risks manageable for the lenders.

**1. INFLATION AND FOREIGN EXCHANGE RISK:**

Income generated by the BOT project with the exception of

telecommunications projects is generated solely in local currency, thereby elevating foreign exchange risk. In order to attract foreign investors, foreign exchange fluctuations, currency convertibility and remittability, as well as inflation variations should be the responsibility of the government

2      **PROJECT/COMMERCIAL RISK**

Project risk involves construction, operating and completion risk. Which is the risk taken that the project will be completed on time and within budget. This risk is assumed by the development of a fixed price construction contract, and the price is increased by a risk factor to compensate the contractor for taking this risk

Commercial risk involves cash flow, capital costs and construction delay risks. To a limited extent these risks should be assumed by the project developer and financial backers because they are foreseeable and manageable.

3.      **POLITICAL/COUNTRY RISK:**

Political/Country risk covers events which are the result of political instability should be the responsibility of the host government. Since these projects usually always involve an international consortia of investors, the government, especially in developing countries must assume this risk to attract international investors.

4      **INSURABLE RISKS:**

Insurable risks generally cover casualty, third party liability, workman's compensation and other commercially insurable risks. Additional commercial risk insurance can be obtained from The United Kingdom's Export Credits Guarantee Department (ECGD).

**5 UNINSURABLE RISKS/FORCE MAJEURE**

Uninsurable risks must be assumed by the appropriate parties through the negotiations process, generally many parties must assume some part of the force majeure risks.

Taking into account the above-mentioned lessons and risks involved in BOT-type projects, we next examine four BOT/BOO type projects carried out in Asia:

Pakistan's Hub River Private Power Project,  
Malaysia's North-South Expressway,  
Thailand's Bangkok Skytrain Project, and  
Philippine's Assistance Program Support Project.

**VI. SELECTED EXAMPLES IN ASIA**

**THE HUB RIVER PRIVATE POWER PROJECT OF PAKISTAN**

Private sector power generation provides a means to increase electric capacity, and it transfers the associated major investment and debt commitment from the government to the private sector. It also allows for the reallocation of scarce resources to priority public sector projects while reducing government subsidies to power production and providing new tax revenues.

The Hub River Power Project has been referred to by John Blackton, the Pakistan director of USAID, as the "make or break" test for these types of projects in the developing world. The Hub River scheme is the largest project of its kind ever undertaken. Originally scheduled to provide 500MW and cost roughly \$900million, the Government of Pakistan received two acceptable proposals and combined them, so the project now stands at 1,200MW to be provided from an oil-fired station at Hub Chowki, 50km west of Karachi, costing roughly \$1.88 billion.

While originally a BOT project, through the negotiations process, it is structured as a BOO scheme which will sell its output to the state-owned Water and Power Development Authority (WAPDA). The BOO decision was made when the consortium decided that a BOT project was deemed contrary to privatization, a primary objective of the Pakistani government at this juncture.

**E. ARRANGEMENT OF THE CONSORTIUM**

The participants in the Hub River Power Project are in Saudi Arabia, Pakistan, Japan, Europe and the U.S. The principal sponsor of the project is Xenel International Energy of Saudi Arabia. Other owners include Mitsui & Co. of Japan and Hawker Siddeley Power, a British firm. Price Waterhouse acted as the financial advisor to the Government of Pakistan.

The makeup of the consortium has changed since the project's proposal development stage. As of December 1989, the original consortium disbanded and withdrew its offer. In May of 1991, the new (current) consortium formed and submitted its formal offer.

**F. PROJECT FINANCING**

HUBCO, the project company, is responsible for providing 20% of the total cost as equity capital from both foreign and local shareholders. The remaining 80% will be borrowed from the PSAs. As of August 1992, the private sector is involved in supplying US\$380 million of equity for the scheme and \$1.5 billion of loans, including a substantial quantity of foreign borrowings.

The debt/equity ratio is constituted as follows

**EQUITY:**

- 7.2% \$136 million by the project company - HUBCO.
- 5.3% \$100 million raised through the public sale of convertible bonds
- 7.7% \$144 million from other overseas investors (CDC).

**DEBT:**

- 70% \$1,313 Foreign Debt (ECAs, PSEDF, ECO (WB), CDC, Other)
- 10% \$188 from local banks

**TOTAL FINANCING:**

\$1.88 billion

The financing structure is designed so that commercial lenders supply money against the revenue stream of the project rather than against the balance sheet of the Pakistan Government.

**G. LESSONS LEARNED**

**1. ESTABLISH STRICT PROPOSAL CRITERIA AND ENSURE COMPLIANCE**

As noted above, the original project size was slated to cost roughly \$900million. However, the evaluating committee received two good proposals and then decided to combine them to provide over double the original wattage from 500MW to 1,200MW.

In addition, various contractual documents could have been prepared, although not in their final form, prior to project development, such as the Fuel Supply Agreement and the Power Purchase Agreement. Such documents should identify and establish the policy and operating issues necessary for a BOT-type project.

**2. KEEP PROJECT SIZE MANAGEABLE**

Due to delays in the commencement of construction and fluctuations in exchange rates, the total cost of the project has now increased from the original amount of \$900million to the current cost of more than \$1.8 billion. This is an extremely large figure for a first-time project and therefore more difficult to arrange the various required financing schemes. In July 1991, a contingency provision of \$200mn to cover cost overruns was added to the project cost, an obvious disadvantage of extending the project life.

**3. REDUCE NEGOTIATIONS STAGE**

One key lesson drawn from this project is that the negotiations phase should be reduced to the

maximum extent possible. Given the numerous parties involved from start to finish in the BOT-type project, negotiations will, by nature, be a trying process. Negotiations for the Hub River Project were lengthy and difficult, due primarily to the fact that the Pakistan government had not appointed a single individual to represent the Government. In addition, on both the public and private sector sides, those involved in the negotiations did not have carte blanche responsibility to commit their parties to all agreements. One key way to avoid these difficulties is to appoint one central negotiator who holds the power to commit the resources of the respective company/government. This is a fundamental step to be taken to reduce the negotiation stage.

In addition, the various government agencies and other vested interests should be informed of the projects purpose, goals and objectives which might impact upon their activities up front. However, at the negotiation stage, these agencies and interest groups must speak with one voice on behalf of the government.

Since BOT-type projects in general, and project financing specifically, are complex, both the public and private sector parties involved must be aware at the proposal development stage of the financial and legal elements of such a project. Also, it should be ensured that the government in particular understands the various legal and financial conventions of the private sector, summarized in the introduction.

Additional ways to reduce the time spent in negotiations is to have identified and/or established policies regarding relevant legislation, foreign investment issues, and legal issues before the project inception.

#### **4. MAINTAIN CLOSE RELATIONSHIP WITH THE GOVERNMENT**

The Muslim Court recently passed the Sharia Law of Pakistan which may directly affect this project, in that it prohibits interest. There have been delays in signing contracts due largely to western bankers' concerns over the potential threat to returns from this law. Obviously, relations with the Government of Pakistan (GOP) must be strong so as to ensure that the project may be constructed and operated under the terms of the contracts signed. In order to cover the problems that will arise as a result of this ruling, the GOP and the World Bank have switched the governing law to English.

Evidence of the strong relationship which Hubco has with the government, and the importance of that relationship, is demonstrated through the numerous risks which the GOP was willing to assume to make this project succeed. The GOP has accepted responsibility for the performance of the utility to whom HUBCO will sell its power generated, the Water and Power Development Authority (WAPDA).

Additional guarantees and commitments were required by the GOP and other state entities, due to their weak credit-worthiness. The resultant security package, governing law, evolved into four sets of documents for HUBCO. They are:



Government of Pakistan:

- Implementation Agreement
- Power Purchase Agreement
- Fuel Supply Agreement

Lenders:

- Senior Loans
- Subordinated Loans
- Intercreditor Arrangements
- Trust/Deed

HUBCO:

- Construction Contract,
- Operation and Maintenance Agreement

Constitutional:

- Articles, Memoranda
- Registration Statements
- Shareholders Agreements

**5. MINIMIZE POLITICAL RISK**

Challenges to financing private power projects in developing countries will be to minimize political risk allowing banks to concentrate on the commercial risk of the project itself. The major risks under this project were seen to be political, rather than technological or market related, and therefore the involvement of development agencies was essential to help spread this developing country risk.

In order to attract additional financing, the World Bank developed the Expanded Cofinancing Operation (ECO). ECO was developed to get the project off the ground by attracting private financing through its involvement in committing equity and substantial guarantees to other investors and lenders.

An alternative method utilized by the GOP to attract foreign investment was its offer to foreign lenders for exchange risk insurance at an extremely competitive rate (3% per year) for the life of the loans. In addition, the GOP has agreed to guarantee the performance of the Water and Power Development Authority (WAPDA), the State Oil Company, and the State Bank of Pakistan. Extraordinary commitments that were required in order to attract the necessary financing for the project.

## **THE NORTH-SOUTH EXPRESSWAY OF MALAYSIA**

The origination of the North-South Expressway project goes back as far as 1978, when, due to heavy traffic growth during the 1970s, the Malaysian Government decided that an interstate expressway should be built along the west coast of the Peninsula where most of the country's population and high traffic densities occurred. The Malaysian Ministry of Public Works was assigned the task of designing and building the new expressway, was planned to be built over a five year period.

The project was split into a dozen packages and design contracts were awarded to consultants. It became clear early on that the project timetable of 5 years was slipping and in order to speed up the process, the government created the Malaysian Highway Authority (LLM) in 1980 and gave it the mandate to finish the project without too much consideration to cost. The authority was hastily set up with staff seconded from the Ministry of Public Works, lacking in capitalization, since it was not originally planned that LLM would be responsible for financing the project. When the government decided to go to external borrowing for the project, it mandated LLM to get commercial funds with the federal treasury providing guarantees.

During the Expressway construction, the LLM became more and more financially strained as it was appointed to finance additional projects, which essentially made the LLM bankrupt. The LLM sought additional financing from the World Bank, and failed, at which time, the Government decided to privatize the project in order to complete it, which is the origination of the current BOT stage of the project.

### **H. ARRANGEMENT OF THE CONSORTIUM**

To initiate the privatization of the North-South Expressway, the government awarded to United Engineers Malaysia (UEM) a contract for M\$3.5 billion to manage the completion of unfinished segments or upgrade existing sections of the major road over a seven-year schedule. UEM has, as major shareholders, the Prime Minister and the Minister of Public Works, the latter also being the executing agency. UEM is overseeing the construction by several contractors. As part of the contract, UEM was given the entire system, including that which was already constructed, to operate and collect tolls during a 30 year period, but the government continued to assume the debt for the road already constructed.

### **I. PROJECT FINANCING**

The project cost is estimated to be up to M\$5.2 billion and is funded through a mix of government and private funds. It includes \$2.5 billion in commercial loans made by local lenders on fixed and floating rates for 15 years. The government provided \$1.7 billion in subordinated loans. In addition, the Government will transfer some existing infrastructure,

already built stretches of the road will be tolled and the revenues attributable to these stretches will be made available to help finance the construction of the new stretches. Tolls from these stretches will provide approximately \$1 billion. About \$800 million in equity was also raised.

The LLM sought financing from the World Bank in excess of M\$600million, who dropped its financing of the project because the design standards and tolling were unacceptable.

## **J. LESSONS LEARNED**

### **1. ACTIVE INVOLVEMENT/INTEREST OF THE GOVERNMENT IN BOT-TYPE PROJECTS**

A critical step taken which made this project possible was that the Government of Malaysia, in the 1980s felt pressure to establish an investment climate more conducive to attracting private investment, and therefore BOT-type projects, and established the Malaysian Industrial Development Authority (MIDA). In addition to this step, the government effectively addressed numerous issues which would directly affect a prospective investor's interest in financing projects in Malaysia. Some of the issues dealt with included the passing of laws and administrative rules relating to public procurement; land laws, tax regulations, stock exchange rules and other hurdles were negotiated.

Furthermore, the speed with which the government established the LLM and gave it the mandate to finance and complete the project is evidence of the government's active interest in seeing that the infrastructure needs of the country are met regardless of how. In addition, the project had the benefit of the feeling among top political operatives that private concessionaires could manage and operate projects of this nature.

### **2. ESTABLISH STRICT SELECTION PROCEDURES**

The selection of the concessionaires for this project was conducted by the government after the LLM failed, and construction was at a standstill. The government played a substantial role in defining and regulating the business terms in an effort to increase competition in the selection process. However, those companies who offered proposals often didn't have the expertise, credit and credibility to implement the concessions. Initially, the government was reluctant to provide a reasonable security package and thereby deterred truly private sponsors from bidding on the project.

The selected concessionaire, as noted above UEM has, as major shareholders, the Prime Minister and the Minister of Public Works, agencies involved in the project. This can lead one to the obvious conclusion of the presence of a conflict of interest, however, it is thought that the government was unable to attract a project company willing to assume the risks the government wanted.

UEM does not have a proven track record or strong financial standing. UEM has no equity of its own, has an accumulated stock deficit of M\$100million and has been suspended from the Kuala Lumpur Stock Exchange. Furthermore, they had a difficult time raising private financing, either local or foreign, for the construction of the remaining sections of the Expressway. Banks considered their financial risk too high or insisted on guarantees the government is not willing to provide.

In the end, the Malaysian government did provide an extensive security package, including traffic volume guarantees, and foreign exchange risk and guarantees against various events of force majeure or government action.

### **3. GOVERNMENT SUPPORT IS CRITICAL**

As noted above, the Malaysian government initially did not want to assume much risk for the project and wanted a security package in which the concessionaire took on more responsibility, the government did provide an extensive security package, including guarantees and covering much of the risks for developing country.

In addition to providing a generous security package to the project company, the government still found it difficult to raise the adequate financing to complete the project, it was rejected financing from the World Bank, and had to also provide extensive guarantees to receive adequate financing. Financing was difficult to raise because parts of the highway can pay for themselves and other segments cannot, and the net effect is a marginal deal from an investor's point of view. The government agreed to provide subordinated project loans to the concessionaire and to provide backup funds in case traffic risks, exchange rate risk or interest rate risk go beyond certain points.

This risk addressed the reluctance that many senior lenders would have to take the risk that the volume of toll paying traffic will be too low to pay off the debt. It also covered the concerns of the equity investors who might also be reluctant to take significant risks in this regard unless they are given a chance to reap significant rewards if traffic meets or exceeds projections.

Also noted above, BOT-type projects are supported by the senior government members, evidenced by the security packages provided, detailed above, and their provision of a substantial support loan for ten years. UEM assumed virtually no risk since the security package includes a pre-completion loan of M\$4750 million to be drawn down during construction and a post-completion loan of M\$950million to be drawn down during the operation phase of the project.

Government support was gained primarily because the public works agencies had some bad experiences on previous projects, resulting in large overruns. This led to a feeling among top

political operatives and within certain segments of the civil service that private concessionaires could manage the risks more effectively. In addition, the public procurement team was centralized at a high level within the government, which created a wider perspective than would have been possible at the level of individual Ministries

#### **4. DEVELOPMENT OF COUNTRY'S FINANCIAL INSTITUTIONS AND CAPITAL MARKET**

One note which could be also applied to the experience of the Eurotunnel project, is that projects of this type succeed most readily when financing for the arrangement is made more attainable. All of the income for this type of project will be in local currency, and will therefore magnify foreign exchange risk. Private concessionaires will not accept that risk meaning the government or a multilateral lending agency must.

Malaysia has an exceptional capital market by developing country standards, and the presence of a sophisticated capital market is invariably one way to assure the presence of local funding. If the funds are raised locally, the risk of exchange rate fluctuation which complicates financing is eliminated.

In addition to its capital market, and unlike most developing countries, Malaysia has a good credit rating on sovereign risks. However, although a UEM, private concessionaire, was selected to build and operate the North-South Expressway, the government was forced to take on all risks associated with the venture and provide substantial guarantees.

For the North-South Expressway of Malaysia Project, its success is a result primarily because of Malaysia's political stability, the size and sophistication of its capital market, low interest rates on borrowed capital, and a strong need for economic development of the Malaysian infrastructure. That need was recognized by Prime Minister and other senior political figures who were willing to put themselves on the line personally to make the projects bankable deals.

THE SKYTRAIN OF THAILAND

During the late 1970s, the Government of Thailand undertook large transport investments and developed a competitive transport industry. The expressed interest of the Government in such projects provides an advantageous foundation for the success of a BOT-type project. Throughout the 1980s, the government has developed numerous BOT-type projects in the transport sector, including the Skytrain project, a \$2.5 billion mass transit project. The government requested proposals to design, build and operate the first 23-mile phase of the Skytrain, in two lines, to carry 40,000 passengers/hour/direction, with an option to develop another 14.3 miles later.

The Government of Thailand through the Expressway and Rapid Transit Authority of Thailand (ETA), awarded the right to build and operate the Skytrain to SNC-Lavalin, a Canadian engineering firm. SNC-Lavalin was contracted to finance, design, build and operate the first 23-mile phase of the Skytrain. The ETA signed the provisional 30-year concession in February 1992 with the aim of largely completing financing and other arrangements by year-end.

However, the ETA declared the master agreement void, (the government withdrew the project from ETA's control), when they did not approve SNC-Lavalin's selection of Bombardier, Inc. The government subsequently launched two new agencies to rationalize the highly fragmented institutional arrangements behind Bangkok's ambitious transportation plans. It created the Metropolitan Rapid Transit Authority to develop alternatives to Skytrain. One alternative has been proposed, an elevated-cum-underground electric train system.

While there have been rumors that the government is exploring alternatives to fund the project itself, as there was a strong financial need on the part of the government to fund the project privately, there is speculation that the financial condition of the government is such that they can now pay for it with tax revenues.

**K. ARRANGEMENT OF THE CONSORTIUM**

While the ETA awarded the contract for the project to SNC-Lavalin of Canada, in addition to the problems mentioned above, the project was provisionally given to the second choice during the bidding stage, the Asia-Euro Consortium, after ETA and SNC-Lavalin were unable to conclude a contract. However, SNC-Lavalin came up with necessary financing guarantees, and was re-awarded the contract.

Currently there is no formally established project company and the financing plan is as well undetermined. However, further negotiations between the Government of Thailand and the original concessionaire are being conducted.

**L. PROJECT FINANCING**

Currently the award of the project is being renegotiated between SNC-Lavalin and the Government of Thailand, the ETA has been removed from the project. The original project financing arrangements were structured with about 60% raised as mixed credits, soft loans mainly from Canada, with a smaller credit from Japan, and the government will provide 25% equity. As of earlier last year, the project financing was to be arranged by Morgan Grenfell and the Thai Farmers Bank. The estimated project cost was US\$1.6 billion.

The Canadian Government has agreed to provide stronger financing support. While originally the Canadian government proposed to provide soft loans, the government of Thailand stated that there would be no government guarantees, and the soft loans could be made only against the guarantee of the government or a premier international bank.

While the details of the financing arrangements for the project are still undecided, as is the fate of the project in general, both should be defined after the conclusion of the on-going negotiations.

**M. LESSONS LEARNED**

**1. ESTABLISH STRICT PROCUREMENT (RFP) REQUIREMENTS**

The bidding procedure was initiated by the Thai Government in 1988. The bidding, the decision-making and procurement process was disorganized, as evidenced by:

- a. The Government's provisional award of the project to the Asia-Euro Consortium.
- b. The Government's cancellation of the contractual master agreement, and
- c. Five years after the RFP process was initiated, the Government is still in negotiations with a concessionaire, and considering publicly funding the project.

In addition to the poor procurement procedure, the contract to design and complete the Skytrain project went to Lavalin, who, after being awarded the contract, went bankrupt and was rescued by SNC.

On top of the financial difficulties of the selected concessionaire, this was the first project for which SNC-Lavalin had bid in Asia. They did not have adequate expertise outside of China, although they have a good reputation in the Canadian market, making it clear that contractors for BOT-type projects must be selected very carefully.

**2. PROJECT SPONSOR MUST RECOGNIZE THE BOT-TYPE PROJECT IS A BUSINESS**

Since BOT-type projects are essentially businesses, a sponsor who fails to approach them as such may risk failure. This appears to be a major lesson to be drawn from the breakdown of negotiations between SNC-Lavalin and the Government in June. They seemed to perceive the project as just a large construction job. This perception is evidenced by the fact that they raised project financing through the Canadian Government, who provided soft loans that could be made only against the guarantee of the Thai government or a first-class international bank, and disregarded the Thai Government's consistently stated condition that there would be no government guarantees.

**3. GOVERNMENT SUPPORT IS CRITICAL**

As discussed in the above three projects, the government must support wholeheartedly BOT-type projects for them to succeed. This support can come through legislation as well as their active involvement in fostering private sector participation in the provision of public infrastructure services. The Skytrain project is no different.

Throughout the bidding life of this project, the Government's interest in the private sector involvement has shifted. At the time the project was bid, the Government had the financial need for the project, and currently there is a perception that the government feels that they can make the necessary investments in infrastructure without the involvement of the private sector. This is evidenced by:

- a. The cancellation of the contract with SNC-Lavalin;
- b. The Government's withdrawal of the project scheme from ETA's direct control, and
- c. The Government's launching of two new agencies to design strategies for improving the efficiency of state enterprises particularly in the transport sector.

Outside of the problems with the contractor, external financing for the project became difficult as a result of the riots in May 1992. The perception of political risk was evident to any investor, and they had to be strongly reassured by the interim government. We have as yet to see what, if any, positive effect they had on persuading the prospective investors to take on the project.

In addition to these country-wide events, the United States Agency for International Development



## ***PRICE WATERHOUSE***

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published a report which details the government's "unwillingness to openly support programs which expand private sector involvement in the provision of infrastructure services" Key issues cited for their lack of support include:

- a. Philosophical and political conflict regarding the role of the government in the provision of utilities,
- b. Fear of loss of power over purchasing and procurement benefits,
- c. Potential corruption resulting from the privatization process, particularly from the selling of assets by politicians for personal gain;
- d. Union leadership pressure on the Government,
- e. Conflict between the military and the government;
- f. National interests may be threatened by foreign interests - neocolonialism; and
- g. Fear of the consequences of privatization. unemployment, bankruptcies, etc.

In addition to the support of the project's host country government, the government of the concessionaire, in this instance, the Canadian Government was involved in the project. The Canadian Government had provided soft loan support for the original project, and has guaranteed additional loans for SNC-Lavalin to persuade the Thai Government during this round of negotiations.

In addition, when the ETA provisionally awarded the contract to Asia-Euro Consortium because SNC-Lavalin was unable to obtain the necessary financing in 1991, SNC-Lavalin was able to come up with the required "guarantee" from Japanese banks. It appears from the text of the "guarantee" that Canada must have applied strong diplomatic pressure on the Japanese banks.

**PHILIPPINES' ASSISTANCE PROGRAM SUPPORT PROJECT (PAPS)**

Price Waterhouse was engaged by US Agency for International Development and the Government of the Philippines in July 1992 to provide technical assistance to the Coordinating Council of the Philippines Assistance Project (CCPAP), in conducting PAPS' Operations Support Component.

The objectives of the technical assistance are to.

- Promote infrastructure projects through the participation of the private sector;
- Introduce private sector competition to lower costs to the GOP;
- Increase the number of projects implemented by the private sector,
- Expedite the implementation of projects through private sector participation, and,
- Ensure that the government's infrastructure privatization program is self-sustaining so that it can manage the basic day-to-day operations of the project.

The technical requirements of the project include:

- Building up the inventory of public sector infrastructure projects implementable by the private sector;
- Promoting and marketing privatization of public sector infrastructure projects;
- Developing the technical skills of local officials to develop build-operate-transfer (BOT) infrastructure projects as well as privatization projects, and;
- Identifying and developing public sector projects for privatization and donor capital financing under the PAP

This assistance program is still in its initial phase and no major project has been funded yet. However, it is expected that, under the leadership of President Ramos and his new administration, PAPS will be a strong catalyst in the development of public-private partnerships in the Philippines. All signs indicate that the current Government is strongly committed to BOT-type projects as evidenced by its strong support for the Hopewell BOT Power Project and PAPS. Given the country's tremendous infrastructure needs and fiscal constraints, BOT-type project will undoubtedly be the most popular project finance method in the Philippines over the next decade.